



**Ticket to Read: Phonics Placement Measure  
Pilot Study  
(Technical Report No. 4)**

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## Introduction

Ticket to Read™ is an interactive, web-based, student-centered learning component that promotes practice of actual text reading. The need for a phonics learning component has been identified and will be added to the Ticket to Read for fall 2008. To ensure students have a successful and meaningful experience with the phonics component of Ticket to Read, a placement measure was developed to determine which entry point is appropriate for each student. This report describes the pilot studies conducted to evaluate the phonics placement measure.

Ticket to Read: Phonics contains multiple paths, where each path focuses on a different set of phonics skills that range from the beginning of kindergarten level through the end of first grade and beyond. There are three identified points of entry in the current set of paths, at the very beginning for students who are just beginning kindergarten called Path 1, at Path 7 for students who have a good grasp of kindergarten level phonics skills, and at Path 12 for students who have a good grasp of first grade phonics skills.

Ticket to Read: Phonics will provide an opportunity for students who are not quite ready to read the Ticket to Read passages to participate in this web-based learning component. It also will allow older students who need additional phonics support a place to learn and practice phonics skills in a motivating, enjoyable environment. The placement measure will not be required for kindergarten students who will start at Path 1. Students in first grade will take the placement measure to determine the most appropriate starting point. For students beyond first grade, it is recommended that the placement measure is used to determine the appropriate entry point for students identified by teachers as needing extra phonics support.

## Phonics Placement Measure

The phonics placement measure is divided into three parts: sounds and phonemes; word recognition; and spelling decodable and sight words. Each part has multiple levels of difficulty. Part A, sounds and phonemes, has three levels of difficulty, Part B, word recognition, and Part C, spelling decodable and sight words, both have two levels of difficulty. Each section has a level of mastery that must be reached. Based on whether or not mastery is reached on a certain part and level, determines the route the student will take through the placement measure. The chart below, Figure 1, shows the different routes students may take when completing the placement measure. The P indicates reaching mastery and the F indicates not reaching mastery.

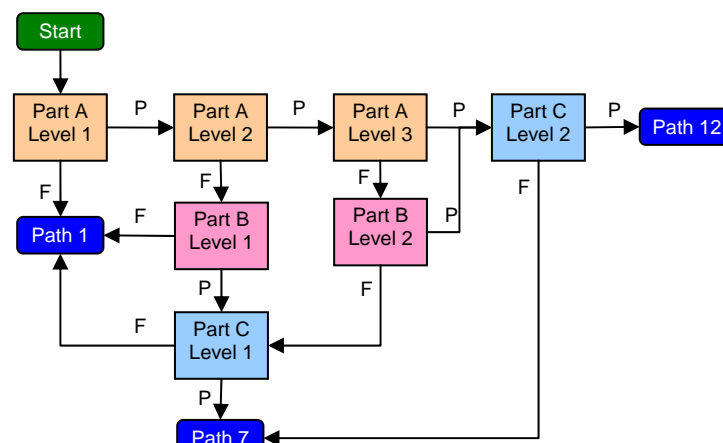


Figure 1. Phonics Placement Measure Map

The route a student takes through the placement measure determines the number of items a student will be presented with and, consequently, the length of time the measure will take. The shortest measure will consist of six items and last approximately 5 minutes and the longest measure will have 32 items and take up to approximately 20 to 25 minutes. The placement measure is designed to be administered and scored online.

Each item on the phonics placement measure has four answer choices. An oral prompt indicated what the student is supposed to do for each item. The student can listen to the prompt a second time by clicking on an ear icon located in the upper right corner of the screen. The student clicks on the answer choice with the mouse. Based on the score of each part, the student will continue with the next section of the placement measure or the measure will be terminated and the student directed to the appropriate entry point in the phonics component of Ticket to Read. The student will not necessarily know when the answer selected is correct or not. Feedback will not be offered to the student as part of the placement measure. Additionally, the student will not be aware of starting a new section or which path through the assessment he/she follows. The following figure, Figure 2, provides an illustration of what the student will see online. For this item, the student would be asked to click on the letter that makes the /z/ sound, as in zebra.

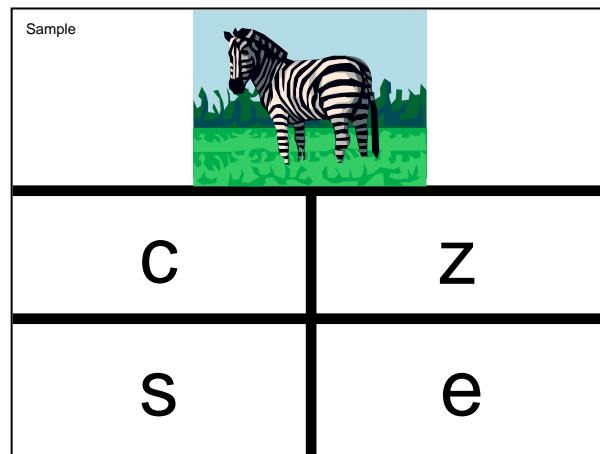


Figure 2. Sample Phonics Measure Item

## Methods

To determine if the placement measure accurately places students into the correct entry point, two pilot studies were conducted at a local elementary school that did not have exposure to Ticket to Read or any of the Voyager Expanded Learning curriculum products. The first pilot study was conducted in May 2008 and the second pilot study was conducted during the summer of 2008. The local elementary school is in a large school district in the Dallas/Fort Worth area. Seventy-six percent of the students in the participating school qualifying for free or reduced cost lunch. Eighty-six percent of the students in the participating school are Hispanic. Fifty-one percent of the students are male.

Students in kindergarten through fifth grade participated in the studies. Students in the fourth and fifth grades were chosen to participate by the teachers in those grades and were considered to be struggling readers. In addition to the phonics placement measure, students also read one to three passages, on different grade levels, to establish an oral reading fluency score for comparison purposes. Two pilot studies were conducted because after the first study, items were changed on the phonics placement measure to better identify the appropriate path for students.

The phonics placement measure was not online at the time of the pilot study, so a paper copy was used. Each student who participated was asked to look at a series of pages that simulated what the online version was going to look like. The biggest difference between the paper copy and the online version was the answers

could not be randomized. The students were seated far enough away from other students and the timing of the administration of the measure was such that any influence from others in the room was at a minimum. Randomization of answers is more important in the online environment where students may be in close proximity and have less supervision from a teacher or other adult.

The passages used to establish oral reading fluency scores came from the Vital Indicators of Progress® (VIP) Reading Connected Text (RCT) passages, which are embedded in the Voyager curricula. The passages were chosen based on the time of year. For each grade level, an end of year grade level passage was chosen. For the first pilot study, fourth and fifth grade students were asked to read the first and second grade passages. Third grade students were also asked to read the first grade passage. Kindergarten students, who were able to read the kindergarten passage, which was the beginning of the first grade passage, with some accuracy, were asked to read the end of year first grade passage as well. The majority of students in the first pilot study who had all measures, 75 (82%), read the first grade passage allowing this to be a point of comparison. For the second pilot study, students were asked to read one first grade passage and one grade level passage only. The kindergarten students read the first grade passage only.

In the first pilot test, the phonics measure was used as it would be online, with the students taking the appropriate path based on correct answers. What that left us with was an uneven distribution of items answered. Students only answered the items on the path they completed. From this data, we were able to identify problematic items. For the second pilot study, we decided that having each student answer all the items would give a better picture of the correct placement and better identify any items that were still problematic.

## Results and Discussion

### *Pilot Study 1*

A total of 105 students participated and ultimately 91 students had all the measures need for inclusion in the analysis for the first pilot study. The chart below, Figure 3, illustrates the total number of students per grade and the number of all students with all measures per grade.

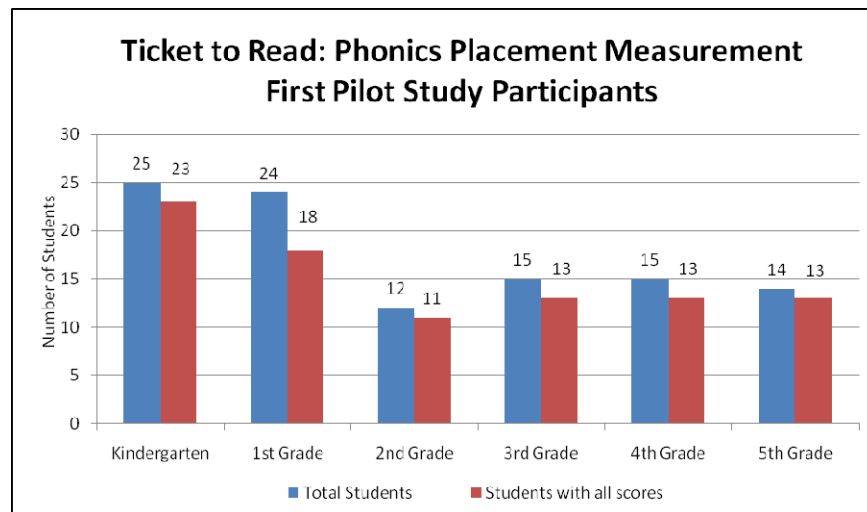


Figure 3. Participating Students in Pilot Study 1

The table below, Table 1, shows the students who participated in the first pilot study by RCT categorical status. The categorical status was based on the end of year RCT fluency goals for each grade level and the number of

correct words read by students on the grade level passage. The categorical status for the kindergarten students, since there are no RCT goals for this level of student, was based on the middle of the year first grade goals. The table shows all students, 91, in all grades who had the necessary scores. The Path 1, Path 7, and Path 12 columns indicate the number of students who would be directed by the placement measure to begin at those entry points.

Table 1.  
*First Pilot Study Results by Category and Path*

	<b>Categorical Status</b>	<b>Path 1</b>	<b>Path 7</b>	<b>Path 12</b>
<i>All Grades (N = 91)</i>	<i>Struggling (N = 27)</i>	8 (29.6%)	11 (40.7%)	8 (29.6%)
	<i>Emerging (N = 35)</i>	12 (34.3%)	13 (37.1%)	10 (28.6%)
	<i>On Track (N = 29)</i>	4 (13.8%)	13 (44.8%)	12 (41.4%)

The second measure, oral reading fluency, allowed analysis of the entry point of the students based on the average correct words per minute (wpm). The following chart, Figure 4, looks at all the students who completed the first grade passage. The overall group was examined since all students read the same passage. The students who qualified to go into Path 1 based on the phonics placement measure had an average oral reading fluency score of 50.1 wpm. The students going into Path 7 had an average of 70.9 wpm and the students going into Path 12 had an average of 98.3 wpm. It would seem that the average oral reading fluency score tracks with the entry path.

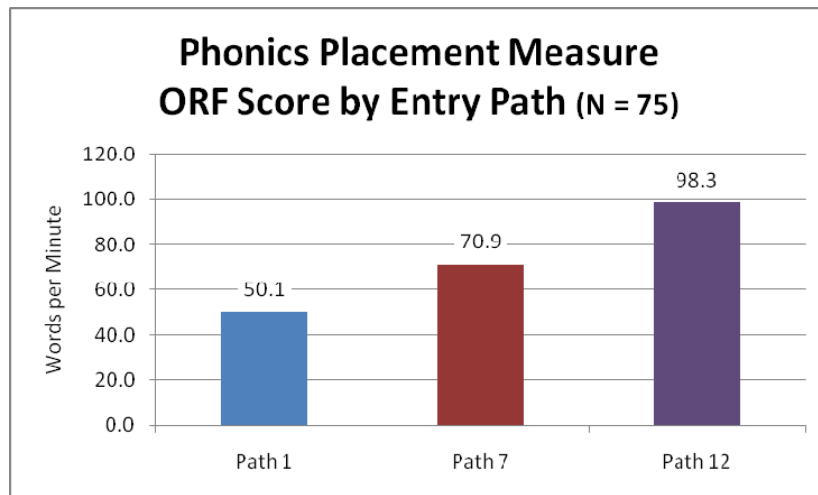


Figure 4. ORF Score by Entry Path

## ***Pilot Study 2***

An item analysis was performed based on the data from the first pilot study to determine if there were any items that appeared to be confusing or did not seem to discriminate well. Out of the original 46 items, 15 (33%) were completely changed, modified by changing distracters, or modified by changing the order of the answers. Several factors were involved with the decision to modify or change an item. First, if only the correct answer was chosen by the majority of students or only one other answer was chosen, it became a candidate for change. If a very high percentage of students always picked the correct answer, the distracters were examined for possible change. In Part C, distracters were adjusted so they would require closer attention to the middle parts of the words with the beginnings and endings being close to identical. Finally, items that were probably part of the normal reading instruction, such as associating the /a/ sound with apple, were changed to something that might be more novel for the students.

The students who participated in the second pilot study were students who attended summer school in 2008. According to school personnel, students who were in need of additional instruction were asked to attend the summer school session. Summer school attendance was not mandatory, but was strongly encouraged. For the second pilot, 128 students in kindergarten through the fifth grade participated and had all scores.

For the second pilot study, all students read the end of year first grade passage, including the kindergarten students, as well as a grade level passage, except for the kindergarten students. For most of the kindergarten students, reading one passage was enough. Also for the second pilot, all students were asked to answer all items on the phonics placement measure, instead of only answering those items along the appropriate path. This helped in two ways. First, trying to navigate the paper copy of the placement measure for the testers was difficult because it required immediate scoring and flipping to the correct next section. Going through each item in sequence was easier for the testers and prevented errors in the administration of the measure. Second, having all students answer all items gave more complete information for the subsequent item analysis.

The figure below, Figure 5, shows the participants of the second pilot study by grade level. All of the students had all of the scores for the second pilot. Table 2 shows the students who participated in the second pilot by categorical status and path.

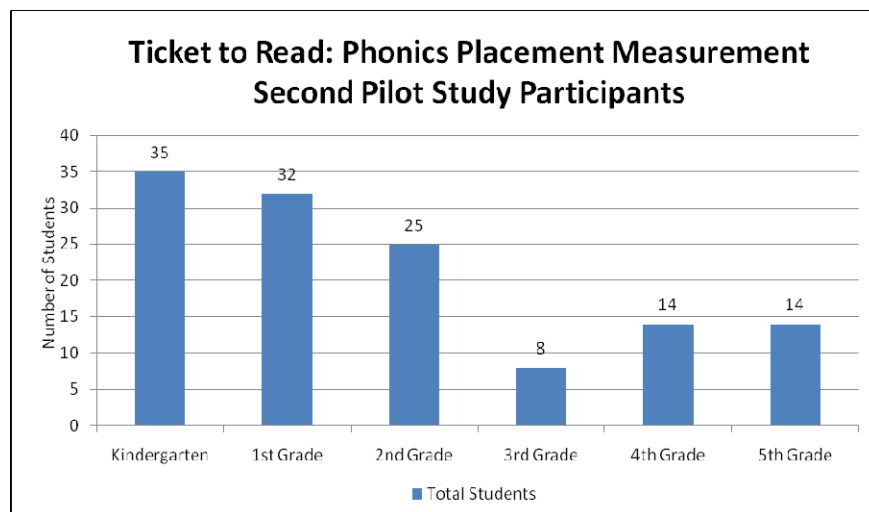


Figure 5. Second Pilot Study Participants by Grade

Table 2.  
Second Pilot Study Results by Categorical Status and Path

	<b>Categorical Status</b>	<b>Path 1</b>	<b>Path 7</b>	<b>Path 12</b>
<i>All Grades (N = 128)</i>	<i>Struggling (N = 63)</i>	40 (63.5%)	14 (22.2%)	9 (14.3%)
	<i>Emerging (N = 41)</i>	23 (56.1%)	11 (26.8%)	7 (17.1%)
	<i>On Track (N = 24)</i>	12 (50.0%)	6 (25.0%)	6 (25.0%)

For the second pilot, all students were given all items on the phonics placement measure. This made a comparison of the first grade passage ORF score to the total number of items answered correctly possible. Table 3 shows the average ORF score on the first grade passage and the average total number of correct items on the phonics placement measure by grade. There are a total of 46 items on the phonics placement measure. There is a statistically significant, high positive correlation between the ORF on the first grade passage and the number of correct answers on the phonics placement measure of .80 ( $p < .001$ ). The scatterplot, Figure 6, further illustrates the relationship between the two measures.

Table 3.  
*First Pilot Study Results by Category and Path*

	<b>Number of Students</b>	<b>First Grade ORF Score (WPM)</b>	<b>Average Total Correct Items</b>
<i>Kindergarten</i>	35	5.37	18.29
<i>First Grade</i>	32	37.06	26.53
<i>Second Grade</i>	25	62.24	31.80
<i>Third Grade</i>	8	66.25	36.75
<i>Fourth Grade</i>	14	100.36	38.43
<i>Fifth Grade</i>	14	113.43	40.29
<i>All Students</i>	128	50.41	28.75

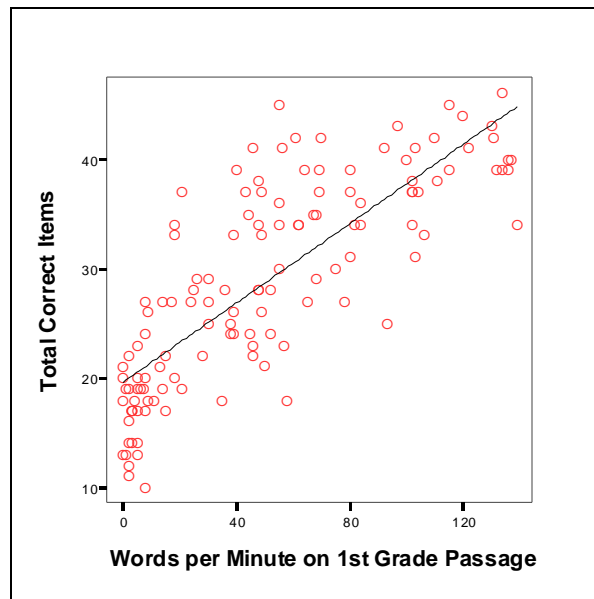


Figure 6. Scatterplot of Total Correct Items and WPM on First Grade Passage

## Conclusion

The pilot studies of the Ticket to Read: Phonics placement measure provided an opportunity to see students using the tool, resulting in modifications so that it provided better discrimination of students' phonics skills and, therefore, more accurate placement within the phonics component of Ticket to Read as illustrated by the second pilot study. There may still be situations where students, for one reason or the other, qualify for a lower or higher path than would be indicated by oral reading fluency scores. In this case, the student will probably be able to move quickly through the familiar material onto what will be more challenging material or teachers can move the student to a more appropriate path within the Ticket to Read product.